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Comparing the Teacher's Attitude to the Top and Normal Students about Various Aspects of Cognitive Growth at High Schools of Tajikistan

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Abstract: Historically, most of the children, adolescents and adults have always been significantly different in terms of physical and intellectual growth during the human life and had the sorts of disability. Among disabilities, the mental retardation has relatively high frequency in different communities, so that, about 2.5% of people in any society have the mental retardation now. This study identifies the importance of this issue and then investigates the effect of teacher's cognitive level about the top and normal students on the attitude towards their cognitive growth aspect at high schools of Dushanbe by utilizing the survey method and the researcher-made questionnaire. The statistical population of this study consists of 360 high school teachers in Tajikistan. The random sampling method is done and the number of sample size was estimated equal to 186 samples through Cochran formula. The research results indicate that there is a relationship between the teachers' social relationship with top and normal students and their attitudes towards the top and normal students' growth. Furthermore, there is a relationship between the teachers' cognition of top and normal students and their attitudes towards the top and normal student's growth.

Key words: Normal student, top student, awareness (understanding), cognitive growth

INTRODUCTION

Paying attention to the human rights, education for all, providing the equal opportunities, social acceptance all citizens and facilitating the process of socialization are among the most important principles of integration programs. Furthermore, the need for implementing the integration programs implies that the children with special needs should have access to educational system as much as the normal children have and the teachers' positive attitudes is one of the factors affecting the success of integrating education programs for mentally retarded children at regular schools. One of the main goals of integration programs of education is to provide the opportunities for normal people's contact with exceptional ones and this change and modifies the individuals' attitudes towards the people with special needs. The aim of this study is to investigate the effect of these factors on teachers' attitudes.

It is evident that the teacher plays the direct and critical role in teaching-learning process because the scientists believe that both major items, teacher and student, are the main parts of teaching process but the teachers play direct roles in learning process. On the other hand, the students directly participate and contribute in learning process. However, if the teacher does not teach the students learning ways, they will not independently and individually learn proper knowledge. The teachers' qualifications and field experience directly make the teacher's roles in teaching-learning process (Birnbaum, 2012).

Despite the fact that the teacher's efficiency is based on his attitude, intentions and personality on the one hand and is the basis of managing the classroom on the other hand, the teacher needs the skills and techniques to create the optimal conditions for learning and learners' scientific, cultural and moral development. Thus, it is worth investigating the levels of teacher's attitudes and relevant important issues including the impact by correlation with knowledge, understanding and social relationship and the conditions affecting its change for normal and top students in addition to the cognitive growth problems and barriers and provide the strategies for coping with barriers to the analysis in order to be able to utilize the strategies to overcome the difficulties and change the classroom environment to an attractive positive place for maximum interaction and learning.

Literature review

Theoretical principles

Attitude: Based on one of the definitions of attitude, "The attitude is a mental and neural state of readiness which has a directing or dynamic influence on the individual's response to all relevant objects or situations through an organized experience" (Karimi, 2000).

Most of the social psychologists agree on a three-component definition of attitude. The first component is the cognitive one including the individual beliefs about an object or thought. The people have different knowledge and information about the phenomena and what is towards them, try to process in different ways and obtain different perceptions and knowledge. These different perception and understanding make their cognitive component of attitude, thus the people have different attitudes about the world compared to each other. Undoubtedly, the attitude of a doctor and specialist in cancer and incurable diseases towards the term "cancer" is different from (or perhaps opposed with) a normal person not familiar with any interesting information about the formation and growth of cells. Furthermore, there is a big difference between an informed student's attitude towards the mathematics and its applications and attractions and the math student's attitude. Therefore, our personal beliefs, that its important part is formed through our knowledge, make a component, cognitive one, of three components of attitude.

Cognitive growth: The cognitive growth is the individual growth over time; in other words, the development of prior intellectual processes from childhood to adulthood. The only theory of cognitive growth with higher influence was the one introduced by Jean Piaget and studied in France for several years. According to Piaget's view, four stages of cognitive growth are: sensory-motional, pre-operational, objective function and nominal operational stage. Children show the great curiosity about the world at the sensory-motional stage: Their behavior is only under the influence of their responses to stimuli. The motional habits make the basis of thought formation. The children's thought at the pre-operational stage is based on the human thinking and self-centralization; at this stage, the children believe that the events occur properly and they like fairy tales. The self-centered thinking means that the children feel that they are at the center of events and everything in the world revolves around them. The self-centered thinking makes it difficult for them to understand the view except their own views. The objective operation is the children's completely objective thinking and without reality. The nominal operation refers to the children's thinking which is growing. The children become capable of abstract thinking and can make elicit and even think about thinking (Bruno, 1991).

Research literature: Numerous local and foreign studies have been conducted in the field of teachers' attitudes towards various students of factors affecting each issue such as student's age and gender, teachers' gender and work experience, students' behavioral and mental health and so on, as follows.

Bhushan investigated the relationship between teacher's attitudes and classroom atmosphere. Minnesota teacher attitude inventory and educational environment questionnaire which measures the students' viewpoints about the learning environment are applied in this regard. The research results indicate that there is a positive relationship between the teacher's attitudes and learning environment; moreover, the domineering, cynical and pressuring ways lead to the student's dissatisfaction and the poor conditions of class reduce the learning ability. In a study entitled as "factors affecting the exceptional and regular teachers' attitudes towards the mentally retarded students and their educational integration", Behpajouh and Ganji investigated the factors associated with the exceptional and regular teachers' attitudes towards the mentally retarded students and their educational integration. The results indicate that the exceptional teachers' attitude towards the students with mental retardation and their educational integration is more positive than the regular teachers' attitude. The results also indicate that regular and exceptional teachers with more social contact with mentally retarded students have more accurate information about them have higher educational levels, passed relevant in-service training courses, are younger and totally have more positive attitude. In a study entitled as "Evaluation of regular, exceptional and integrated school teachers' viewpoints on the integrated education of exceptional children in East Azerbaijan province", Khanjani and Bahari (2004), investigated the attitudes of 448 teachers at regular schools, 81 ones at exceptional schools and 116 ones at integrated schools. Their results indicated the exceptional teachers educated in the fields of educational sciences were those participated in integrated education courses and the primary and high school teachers had more positive attitudes than other participants. In a study entitled as "the influence of teaching experience and professional development on Greek teacher's attitudes", Avramidis and Kalyva (2007) investigated the effect of 155 regular teachers' teaching experience in the primary period of one of the Greek cities on their attitudes towards the inclusive program. They reported that the regular teachers' attitudes are generally positive towards the inclusive programs but it varies according to the various groups of exceptional students so that the teachers of mentally retarded students expressed more positive attitudes than other groups. Najafi-zand investigated the teachers' attitudes towards the educational success and

their success according to the students and manager's viewpoints through Minnesota Teacher Attitude Inventory and found the following results: There is a significant relationship between the teachers' attitudes towards the students and the students and managers' evaluation of their efficiencies. Female teachers and those teaching at elementary schools had more positive attitudes than the male teachers and the teachers who teach at secondary schools.

MATERIALS AND METHODS

This research is applied based on the objective and among the survey-descriptive studies in terms of data collection. The aim of descriptive studies is to describe the studied conditions and phenomena and the survey method is applied for evaluating the distribution of statistical population characteristics. Furthermore, this study is correlative in terms of relationship between variables.

Statistical population: The statistical population of this study consists of teachers at schools of Dushanbe city with mentally retarded students selected by systematic sampling. The statistical population of this study consisted of 360 (teachers at high schools of Tajikistan) and the number of samples was estimated equal to 186 through Random sampling method and applying Cochran's formula:

$$n_{cochran} = \frac{\frac{P(1-p)z^2 1-\alpha/2}{d^2}}{1+1/N\left(\frac{P(1-p)z^2 1-\alpha/2}{d^2}-1\right)} = \frac{\frac{0.5\times 0.5(1.96)^2}{(0.05)^2}}{1+1/360\left(\frac{0.5\times 0.5(1.96)^2}{(0.05)^2}-1\right)} = \frac{384-16}{2.0643} \cong 186$$

Where:

P = 0.5: The probability of occurred trait in the population is considered equal to 0.5 due to the unavailability

$Z_{1-\alpha/2}$ = 1.96 (α = 0.05)

d = 0.05: The maximum acceptable error

N = 360: Population size

$n_{cochran}$ = Sample size

Reliability and validity of questionnaire: The validity refers to what extent the tool's content or questions of questionnaire accurately measures the studied variables and subject? In other words whether what we think we really measure or not? The validity is associated with the appropriate information provided by the test for decision-making process. Thus, the judgment about the validity is always studied in the field of a certain decision or specific application. The experts, specialists and professor's viewpoints on the research and questionnaire are usually applied in order to estimate the validity of questionnaire and its questions.

There are different methods for measuring the reliability: The retest, parallel method, halfing method and Cronbach's alpha coefficient. The experts' viewpoints are utilized in this research in order to estimate and provide the validity of research and questionnaire and also Cronbach's alpha coefficient is used to determine the reliability of questionnaire. The Cronbach's alpha method is applied for measuring the internal consistency of measurement tools such as questionnaires or tests which measure various features. In these tools, the answer to each question can have different numerical values. For measuring Cronbach's alpha, first we should calculate the variance of scores for each subset of questionnaire and the total variance. Then, Cronbach's alpha coefficient can be measured through the following formula and SPSS Software:

$$\alpha = \left(\frac{j}{j-1}\right)\left(1-\frac{\Sigma S_j^2}{S^2}\right) \quad (1)$$

Where:

α = The estimated test validity

j = Number of test questions

S_j^2 = The variance of subset j

S^2 = The total variance of test

Research variables

The research variables include: The independent variables are defined as the knowledge and understanding of students and social relationship with them and the dependent variable as the teacher's attitudes towards the student's growt. Components of understanding the students include:

- Understanding the students' characteristics
- Understanding the causes of underdevelopment students
- Understanding the proper methods of behavior and discussion with students

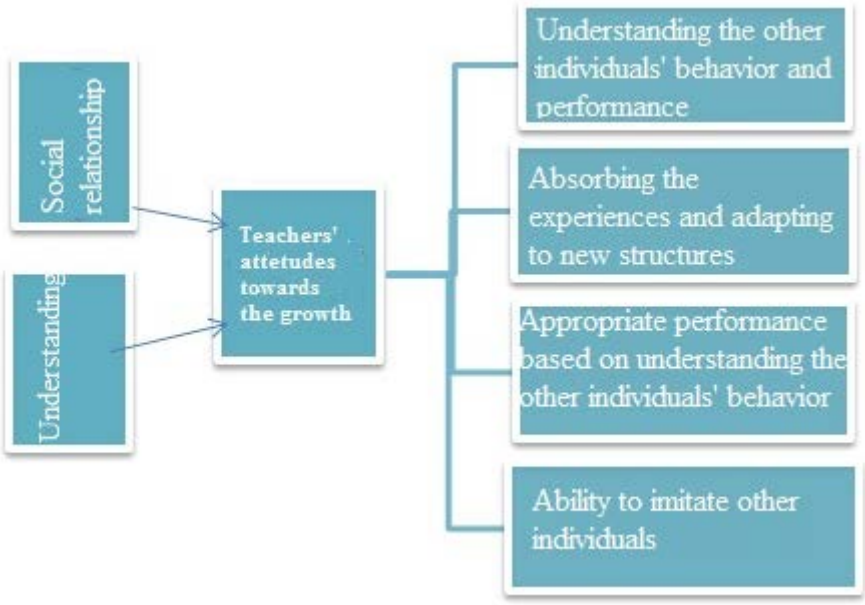

Fig. 1: Conceptual model of research

- Understanding the Islamic view about training the students
- Familiarity with student's wishes and values

The components of relationship with students include:

- Participation in group work with students
- Participation in sports programs with students
- Participation in classrooms of students' individual skills
- Participation in group games with students
- Participation in group discussion with students

Indicators of cognitive growth:

- Understanding the other individuals' behavior and performance
- Absorbing the experiences and adapting to new structures
- Appropriate performance based on understanding the other individuals' behavior
- Ability to imitate other individuals
- Conceptual model of research
- Conceptual model of research (Fig. 1)

RESULTS AND DISCUSSION

Data analysis

Description of underlying variables

Educational grade: Table 1 shows that 35.5% of sample teachers have taught in the fourth grade of high school, 27.9% in the third grade, 20.8% in first grade and 15.8% in the second one (Fig. 2).

Table 1: Educational level

Educatuinal level	Frequency	Percentage
First grade	38	20.8
Second grade	29	15.8
Third grade	51	27.9
Fourth grade	65	35.5
Missing data	3	1.6
Total	186	100.0

Table 2: Years of experience

Experience (years)	Frequency	Percentage
1-10	78	42.4
11-20	74	40.2
21-30	19	10.3
Above 30	13	7.1
Missing data	2	1.1
Total	186	100.0

Years of experience: Table 2 shows that 42.4% of samples have from 1-10 years of experience, 40.2% from 11-20 years, 10.3% from 21-30 years and 7% obove 30 years of teaching experience (Fig. 3).

Educational level: Table 3 shows that 41% of teachers had bachelor's degree, 36.6% associated degree, 15.3% master and 7.1% above master degree (Fig. 4).

Understanding the top students: Table 4 shows the teachers' understanding of top students. As shown in the table, the index of understanding the top students indicates that 32.3% of teachers have high understanding of top students. The average index is 3.7 (Fig. 5).

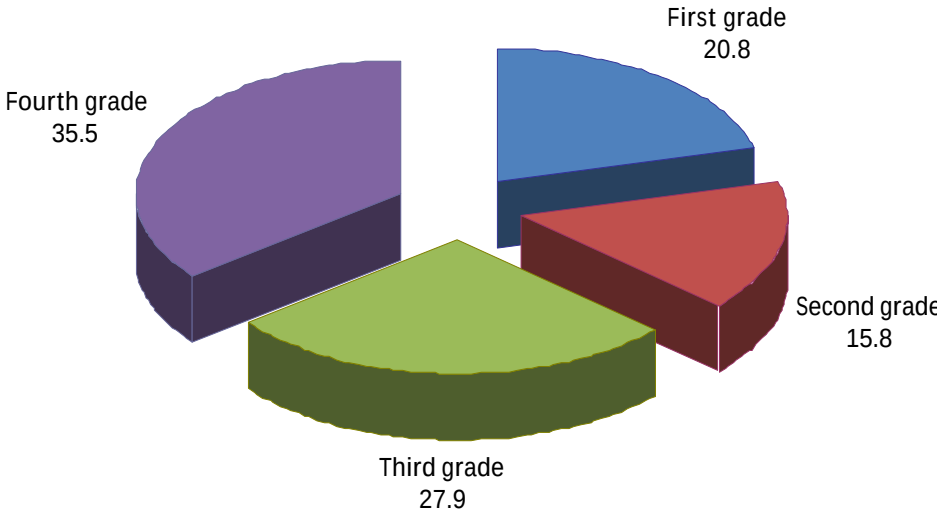

Fig. 2: Educational grade

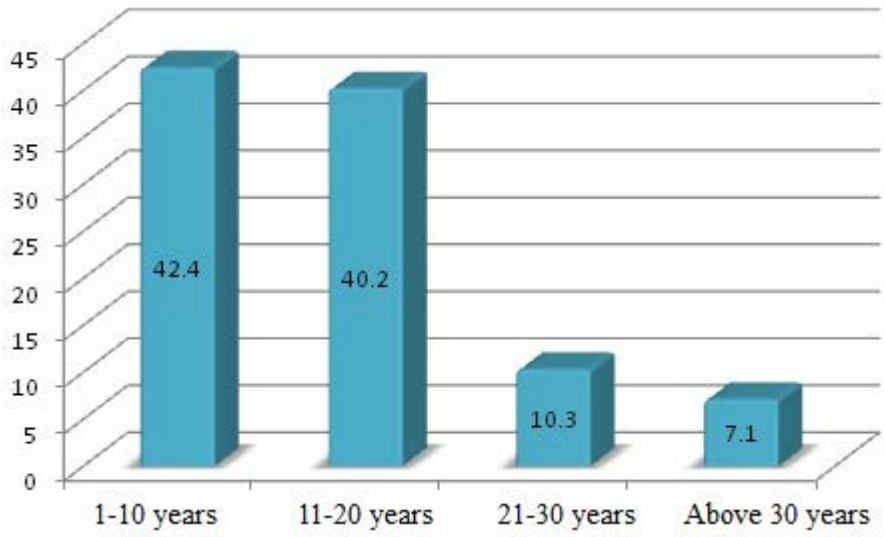

Fig. 3: Years of experience

Understanding of normal students: Table 4-7 shows that the teachers' understanding of normal students. 21.5% of teachers have admitted that they have moderate understanding of these students, while about 66% have stated that they have high and very high understanding of these students. The average of this index is 3.8 (Fig. 6).

Cognitive growth (Top students): Table 6 shows the teachers' attitudes towards the top students' cognitive growth. 34.4% of teachers have expressed that the top students' understanding of other individuals' behavior is very high. Furthermore, the average ability to imitate other individuals in these students is = 3.9. The cognitive growth index also indicates that 50.7% of teachers believe that these students' cognitive growth is also very high. However, the average of this index is moderate (Fig. 7).

Table 3: Educational level

Educational level	Frequency	Percent
Associated degree	67	36.6
Bachelor	75	41.0
Master	28	15.3
Above master	13	7.1
Missing data	3	1.6
Total	186	100.0

Cognitive growth (regular students): Table 7 shows the extent of teachers' attitudes towards the normal students'

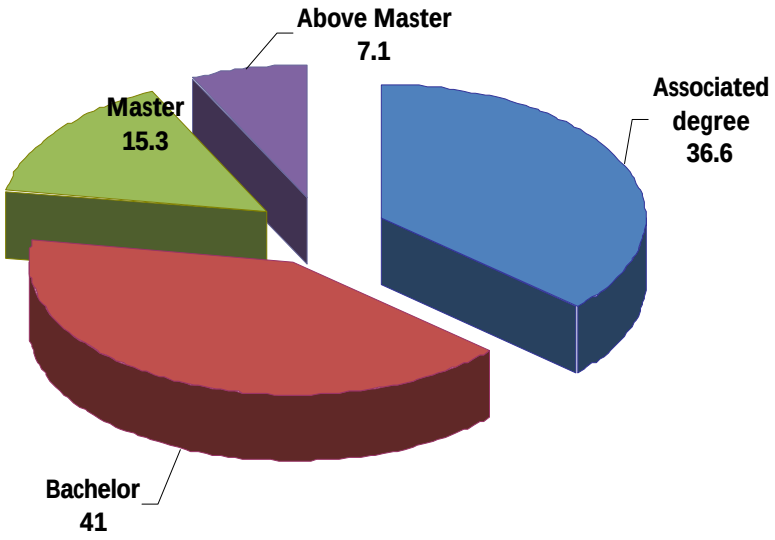

Fig. 4: Educational level

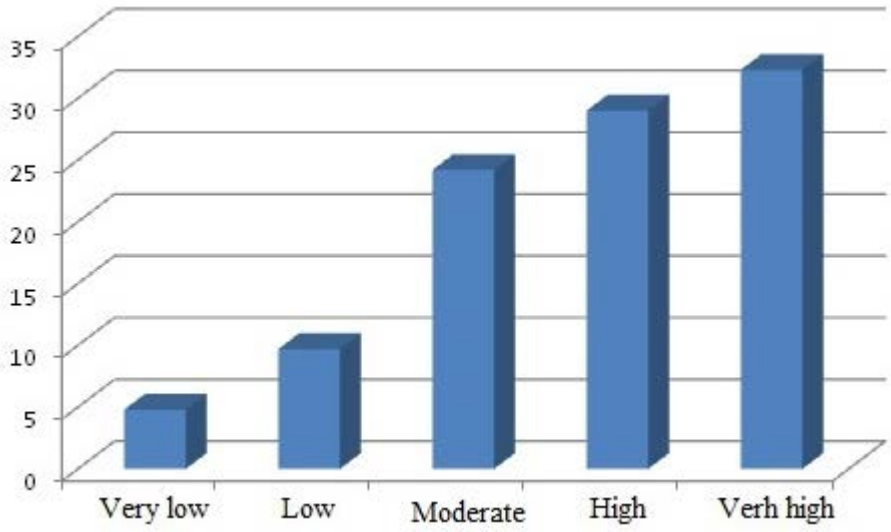

Fig. 5: Index of understanding the top students

Table 4: Understanding of top students

Questions	Very low	Low	Moderate	High	Very high	Total	Mean	SD
To what extent you are familiar with top students and their features?	6.5	10.2	18.8	27.4	37.1	100	3.7	1.22
To what extent you are familiar with causes of top students' underdevelopment?	3.2	3.8	15.6	27.4	50.0	100	4.1	1.00
To what extent you are familiar with behavior and discussion with top students?	11.8	12.4	18.3	26.3	31.2	100	3.5	1.30
To what extent you are familiar with top students' wishes and values?	21.5	17.2	18.8	21.5	21.0	100	3.0	1.40
Understanding of top students	4.8	9.7	24.2	29.0	32.3	100	3.7	1.15

Table 5: Understanding of normal students

Questions	Very low	Low	Moderate	High	Very high	Total	Mean	SD
To what extent you are familiar with normal students and their features?	6.5	8.1	16.1	28.0	40.8	100	3.87	1.21
To what extent you are familiar with causes of normal students' underdevelopment?	4.3	5.9	12.4	30.6	46.8	100	4.09	1.10
To what extent you are familiar with behavior and discussion with normal students?	9.1	7.0	21.0	30 (0.6)	32.3	100	3.70	1.24
To what extent you are familiar with normal students' wishes and values?	17.2	10.8	25.8	17.2	29.0	100	3.30	1.43
Understanding of normal students	4.3	7.0	21.5	35.5	31.7	100	3.80	1.00

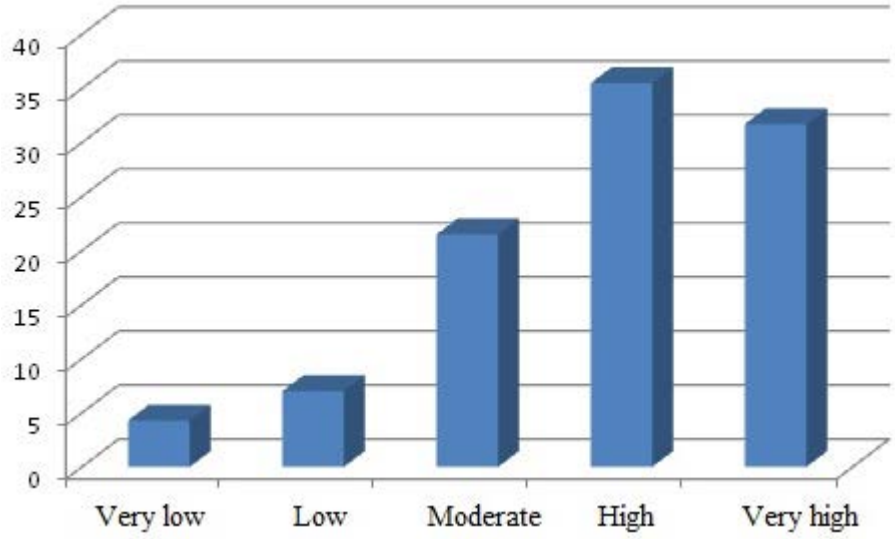

Fig. 6: Understanding of normal students

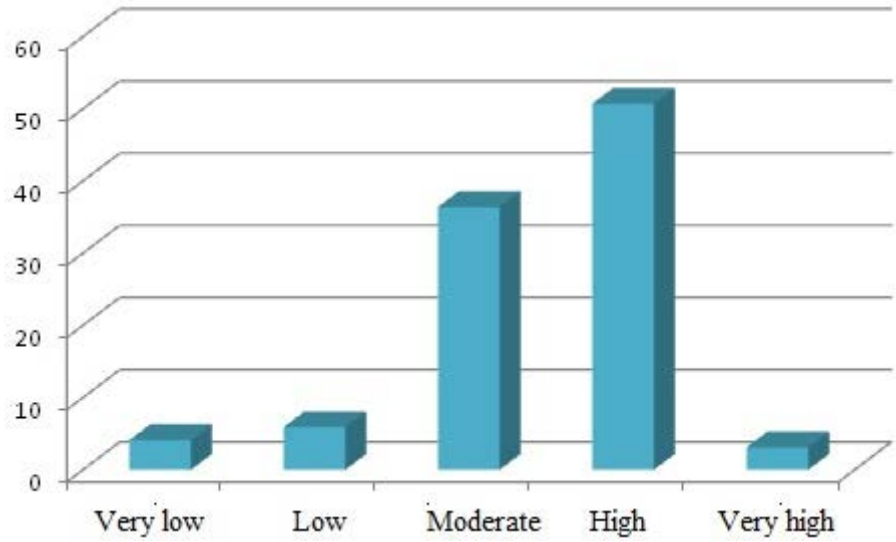

Fig. 7: Cognitive growth index for top students

Table 6: Cognitive growth (top students)

Items	Very low	Low	Moderate	High	Very high	Mean	SD
Understanding the other individuals behavior and performance	3.2	2.7	29.0	30.60	34.4	3.9	1.0
Absorbing the experiences and adapting to new structures	3.2	9.1	23.7	32.30	31.2	3.7	1.0
Appropriate performance based on understanding the other individuals' behavior	3.2	9.1	24.7	31.20	31.7	3.7	1.0
Ability to imitate other individuals behavior	3.2	3.8	24.7	26.30	38.7	3.9	1.0
Cognitive growth index of top students	4.1	5.9	36.4	7.05	3.1	3.0	0.6

Table 7: cognitive growth (normal students)

Items	Very low	Low	Moderate	High	Very high	Mean	SD
Understanding the other individuals behavior and performance	33.3	32.800	29.000	2.2	2.7	2.0	0.90
Absorbing the experiences and adapting to new structures	33.5	34.100	25.800	5.5	1.1	2.0	0.90
Appropriate performance based on understanding the other individuals' behavior	33.3	33.900	25.100	4.9	2.7	2.0	1.00
Ability to imitate other individuals behavior	44.3	28.100	18.900	4.3	4.3	1.9	1.00
Cognitive growth index of top students	8.0	0.105	0.273	2.7	2.0	2.4	0.55

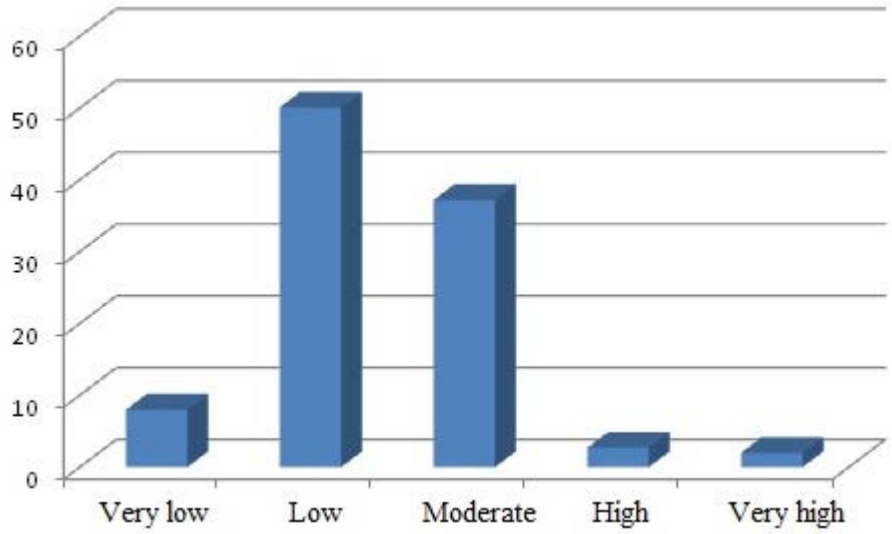

Fig. 8: Cognitive growth index for normal students

Table 8: Correlation between independent and dependent variables for top students

Variables	Correlation type	Social relationship	Understanding
Top students growth	Pearson correlation value	0.298	0.607
	Significance level	0.000	0.000
	Total	186.000	186.000

Table 9: Correlation between the dependent and independent variables in normal students

	Correlation type	Social relationship	Understanding
Normal students growth	Pearson correlation value	0.176	0.156
	Significance level	0.022	0.043
	Total	169.000	169.000

cognitive growth. As shown in Table and according to 37.2% of teachers view, these students' cognitive growth is moderate. The average cognitive growth for these students is 2.4 (Fig. 8).

Table 8 shows the correlation between the teachers' attitudes towards the top students' growth and the teachers' social relationship with them and teachers' understanding of these students. As shown in the table, increased teachers' social relationship with top students will lead to their enhanced growth rate. This relationship is statistically significant.

Furthermore, the more the teachers' understanding of these students is increased, the better they evaluate the students' growth and vice versa, the teachers who have less understanding of top students, they have evaluated their growth at lower level.

Table 9 shows the correlation between the social relationship independent variables and understanding the normal students with understanding of normal students' growth as the dependent variable is. As shown in the Table 9, there is a positive and significant correlation between the teachers' rate of social relationship with normal students and their evaluation of normal students' growth. In other words, the more the teachers have higher relationship with normal students, the more they have better evaluated their abilities and growth in different aspects. Moreover, the less they have relationship with these students, the less they have been able to assess their abilities. Furthermore, if the teachers have more understanding of normal students, they will be able to evaluate their growth rate at the higher level and vice versa.

CONCLUSION

Historically, the theory of growth is rooted in the philosophy and history of human wisdom because the human aim of life is to grow towards desirability and excellence, or in a more complete word, movement towards improvement. The retrogression or moving towards the ruination is the contrast point to the growth. Obviously, the historic and prehistoric man has always moved towards the goodness for his growth due to his nature, despite the fact that his intellectual and physiological

conditions have also provided the retrogression for him. However, the human nature is more powerful for moving towards the growth and desirable excellence because the human fights for survival and life not for ruination and death. Since, the human relationships pay special attention to the mutual human behavior in social organization and seek to enhance the organizational effectiveness and efficiency relying on the importance of human aspect of organization as well as satisfying them by fulfilling the logical physical and mental demands of individuals and groups, this research examines the human relationship in line with growth and excellence.

Investigating the short history of individual's social psychology indicates that the formation of attitude and changing the public negative attitudes towards this group are the most important and basic issues associated with the mentally retarded people because the success of rehabilitation and educational programs especially implementing the programs such as the institute removing and social integration depend on the pervasive positive attitude in society. The research results indicate that Pearson correlation coefficient is = 0.607 between teachers' understanding of normal students and their growth; furthermore the coefficient between teachers' understanding of normal student and their attitudes towards the growth is 0.156. This relationship is statistically significant. Thus, it can be concludes that if the teachers' understanding of his characteristics is enhanced, the attitudes towards the student's growth will be improved.

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